

**Three Rivers Park District Watercraft Inspection Program
Final Report-2024
for
Hennepin County Aquatic Invasive Species Prevention Grant**



***Prepared by:
Brian Vlach
Senior Manager of Water Resources
Three Rivers Park District***

I *Introduction*

Hennepin County awarded Three Rivers Park District (TRPD) an Aquatic Invasive Species Prevention Grant for \$50,000 to:

1. Supplement the watercraft inspection efforts at Bryant Lake where zebra mussels were found in the fall of 2015.
2. Supplement the hours for watercraft inspection as well as provide level II decontamination services for incoming and outgoing watercraft at Medicine Lake (Plymouth). Medicine Lake has become a primary vector for spread of zebra mussels (discovered in 2017) and starry stonewort (discovered in 2018).
3. Supplement the watercraft inspection efforts at Fish Lake (Maple Grove) where zebra mussels were found in the fall of 2022.
4. Supplement the watercraft inspection efforts at the public accesses on Twin Lakes (Robbinsdale) and Little Long Lake (Minnetrista).
5. Supporting watercraft inspection effort and providing Level II decontamination services at Lake Minnetonka Regional Park access.

The project included two main activities: (1). The hiring and training of additional watercraft inspectors to extend coverage beyond an overall “baseline” effort and (2). Scheduling/providing supervisory oversight for the additional inspectors in the execution of their duties at the specific sites to which they were assigned.

Hennepin County has generously awarded \$50,000 to supplement Three Rivers Park District existing watercraft inspection program for Medicine, Fish, Bryant, Lake Minnetonka Regional Park, Little Long and Twin as the targeted lakes identified in the grant contract agreement. In 2018, Hennepin County also generously awarded Three Rivers Park District \$20,000 for the purchase of a decontamination unit to be used at Lake Minnetonka Regional Park; and awarded Bassett Creek Watershed Management Commission \$20,000 for the purchase of a decontamination unit to be used at French Regional Park – Medicine Lake. A portion of the grant dollars awarded in 2023 was used for the continual operation and maintenance of both decontamination units. The decontamination units were operated and maintained by Three Rivers Park District Level II staff during incoming and exiting watercraft inspections. Bassett Creek Watershed Management Commission provided \$5000 to assist with the Level II staffing and operation for the decontamination unit at French Regional Park-Medicine Lake. The awarded grant dollars and financial assistance from Hennepin County and Bassett Creek Watershed Management Commission has been critical to supplement and improve the Three Rivers Park District watercraft inspection program.

II Results

Following is a summary of highlights for the 2024 watercraft inspection program as it pertains to this grant:

- Watercraft Inspection Certification used a hybrid training approach that provided both on-line and in-person training opportunities in 2024.
 - Level 1 Watercraft Inspection Certification
 - Level 1 watercraft inspectors that are new and are training to become authorized for the first time in 2024 must complete both online and in-person training.
 - Level 1 watercraft inspectors previously authorized in 2023 will be required to complete both on-line and in-person training. These inspectors will receive a 30-day authority to complete in-person training after passing the on-line training.
 - Level 1 watercraft inspectors authorized in 2022 and 2023 are just required to complete the on-line training.
 - Level 1 watercraft inspectors authorized in 2021, 2022, and 2023 are required to complete the on-line training only.
 - Level 1 watercraft inspectors authorized in 2020, 2021, 2022, and 2023 are required to complete both on-line and in-person training. These inspectors will receive a 30-day authority to complete in-person training after passing the on-line training. These 5th year inspectors will mentor the new inspectors at the in-person training.
 - Level 2 Watercraft Inspection Certification
 - Level 2 watercraft inspectors that are new and are training to become authorized for the first time in 2024 must complete both on-line and in-person training.
 - Level 2 watercraft inspectors authorized in 2023 are required to complete on-line training.
 - Level 2 watercraft inspectors authorized in 2022 and 2023 are required to complete on-line training.
 - Level 2 watercraft inspectors authorized in 2021, 2022, and 2023 are required to complete on-line training.
 - Level 2 watercraft inspectors authorized in 2020, 2021, 2022, and 2023 are required to complete on-line and in-person training. In-person training needs to be completed within 30 days of completing on-line training.

- Watercraft Inspection Training on-line became available on April 8, 2024. Three Rivers Park District hosted nine Level 1 and two Level 2 in-person training workshops in 2024. The workshop sessions were led by the MnDNR with TRPD water resources and facility operations staff assisting with the training.
 - Level 1 In-person Training Workshops
 - April 25 – French Regional Park
 - May 3 – French Regional Park
 - May 10 – French Regional Park
 - May 11 – French Regional Park
 - May 23 – French Regional Park
 - June 1 – Lake Minnetonka Regional Park 9 AM – 12 PM
 - June 1 – Lake Minnetonka Regional Park 1 PM – 4 PM
 - June 5 – French Regional Park
 - June 10 – Lake Minnetonka Regional Park
 - Level 2 In-person Training Workshops
 - May 23 – Baker Park Reserve
 - June 5 – French Regional Park

- A total of 98 TRPD staff were authorized as Level I inspectors for the 2024 season. There were 8 more individuals hired in 2024 in comparison to 90 Level I inspectors hired in 2023. The hiring of seasonal staff has improved the past two years (2023 & 2024) since there has been an increase in seasonal wage rates.

- A total of 23 of the 98 TRPD staff were also authorized as Level II inspectors for the 2024 season to operate decontamination units at 2 accesses covered by this grant (French Regional Park-Medicine Lake and Lake Minnetonka Regional Park) and 1 access that is not covered by this grant (Baker Park Reserve-Lake Independence).

- Staff typically conduct watercraft inspections at a total of 10 accesses within the Three Rivers Park District metro area. Six of these access locations receive grant funding to supplement our watercraft inspection program (Medicine Lake, Fish Lake, Bryant Lake, Twin Lakes, Little Long Lake, and Lake Minnetonka). Certified Level I and Level II seasonal staff dedicate 90% to 100% of their time toward watercraft inspection surveys.

- TRPD provided all Level I and Level II inspection staff with tablets that had the watercraft inspection application provided by MnDNR. Data recorded by the inspectors using the tablet and application were uploaded to the MnDNR data base.

Table 1 shows the percent of total inspection hours that were funded by the Hennepin County AIS prevention grant for each of the accesses.

Table 1 – Percent of Total Watercraft Inspection Hours Funded by Hennepin County AIS Prevention Grant by Lake Access (2024)

<i>Access</i>	<i>Total Inspection Hours</i>	<i>Inspection Hours Assigned to AIS Prevention Grant</i>	<i>% of Inspection Hours Funded by AIS Prevention Grant</i>
Medicine Lake	1473	721	49%
Fish Lake	2014	860	43%
Bryant Lake	1330	760	57%
Twin Lakes	141	91	65%
Little Long Lake	210	136	65%
Lake Minnetonka ¹	1005	655	65%
Total	6172	3223	52%

¹ Access at Three Rivers Park District - Lake Minnetonka Regional Park

The Hennepin County AIS Prevention Grant supplements the Three Rivers Park District watercraft inspection program. Table 2 shows the Three Rivers Park District total expenditures for staff wages to conduct the watercraft inspection program for 2024. The Hennepin County AIS Prevention Grant supplements approximately 54% of the Three Rivers Park District total staffing costs for the accesses covered by the grant program. It should be noted that the Three Rivers Park District total costs are conservative because they only take into consideration staff service hours during inspections and does not take into consideration the costs associated with Level I and II training.

Table 2 – Cost Distribution Funded by Hennepin County AIS Prevention Grant by Lake Access 2024.

<i>Access</i>	<i>TRPD Total Inspection Costs</i>	<i>Assigned Hennepin County AIS Prevention Grant Costs</i>	<i>% of Inspection Hours Funded by AIS Prevention Grant</i>
Medicine Lake	\$22,565	\$10,743	48%
Fish Lake	\$32,865	\$14,260	43%
Bryant Lake	\$21,690	\$12,381	57%
Twin Lakes	\$2,031	\$1,315	65%
Little Long Lake	\$2,998	\$1,950	65%
Lake Minnetonka ¹	\$14,976	\$9,351	62%
Total	\$92,542	\$50,000	54%

¹ Access at Three Rivers Park District - Lake Minnetonka Regional Park

Table 3 shows the percentage of the total inspection hours and the number of decontaminations that were completed by a level II certified watercraft inspector.

Table 3 – Decontamination Watercraft Inspection Hours and Hours of Operation 2024

<i>Access</i>	<i>Decontamination Inspection Hours</i>	<i>% of Total Inspection Hours</i>	<i>Total Number of Decontaminations</i>
Medicine Lake	318	22%	85
Lake Minnetonka	277	28%	6

Table 4 summarizes the watercraft inspection results by access for the five lakes covered under this grant other than Lake Minnetonka.

Table 4 – Watercraft Inspection Results for 2024 by Lake Access

<i>Parameter</i>	<i>Lake Access</i>					<i>TOTALS</i>
	Medicine	Fish	Bryant	Twin	Little Long	
<i>Total # of inspections</i>	4850	2845	1452	78	126	9351
<i>Inspection Hours</i>	1473	2014	1330	141	210	5168
<i>Inspections/hr.</i>	3.29	1.41	1.09	0.55	0.60	1.81
<i># in-bound inspections</i>	3825	2838	794	55	80	7592
<i># outbound inspections</i>	1013	0	656	23	46	1738
<i># Contaminated watercraft</i>	69	99	4	0	1	173
<i># Zebra Mussel Contaminations</i>	9	6	1	0	0	16
<i>Entering</i>	2	6	1	0	0	9
<i>Exiting</i>	7	0	0	0	0	7
<i>%Contaminated Watercraft</i>	1.80%	3.49%	0.5%	0.0%	1.3%	2.3%
<i># Drain Plug Violations</i>	57	44	1	0	0	134
<i>% Drain Plug Violations</i>	1.5%	1.6%	0.1%	0.0%	0.0%	1.8%

Note: This table does not include Lake Minnetonka Regional Park data.

Table 5 summarizes the watercraft inspection results for the Lake Minnetonka Regional Park access covered under this grant.

Table 5 – Lake Minnetonka Regional Park Inspection Results for 2024

<i>Parameter</i>	<i>Lake Minnetonka Regional Park</i>
<i>Total # of inspections</i>	3015
<i>Inspection Hours</i>	1005
<i>Inspections/hr.</i>	3.0
<i># in-bound inspections</i>	2043
<i># outbound inspections</i>	971
<i># Contaminated watercraft</i>	73
<i># Zebra Mussel Contaminations</i>	9
<i>Entering</i>	2
<i>Exiting</i>	7
<i>% Contaminated Watercraft</i>	3.57%
<i># Drain Plug Violations</i>	29
<i>% Drain Plug Violations</i>	1.42%

The following is a summary and conclusion from the above information with supporting observations from operations staff:

- The Hennepin County AIS grant funds were used to support supplemental watercraft inspections at Medicine Lake, Fish Lake, Bryant Lake, Twin Lake, Little Long Lake, and Lake Minnetonka Regional Park. Little Long Lake did not have any watercraft inspection service hours in 2020 due to staffing and budgetary constraints from the Covid pandemic (Table 6). Watercraft inspections resumed for Little Long Lake in 2021 through 2024.
- There were 98 certified watercraft inspectors in 2024 for TRPD. The number of certified watercraft inspectors in 2024 is still lower in comparison to pre-covid pandemic numbers where TRPD would typically have 120 certified watercraft inspectors. The shortage and difficulty in hiring/recruiting seasonal staff has been noticeable post-covid throughout the park district for both maintenance and facilities. The Park District increased wage rates in 2023 & 2024 through approved tax levy increases, which has addressed some of the staff shortage issues that were experienced immediately following post covid. Despite fewer watercraft inspectors post covid, the total number of watercraft inspection service hours has been consistent the past two years (2023 & 2024) (Table 6).

Table 6 - Comparison of watercraft inspection service hours provided for 2020-2024.

<i>Access</i>	<i>Inspection Hours 2020</i>	<i>Inspection Hours 2021</i>	<i>Inspection Hours 2022</i>	<i>Inspection Hours 2023</i>	<i>Inspection Hours 2024</i>
Medicine Lake	2178	2442	1460	1532	1473
Fish Lake	1900	2178	2180	2122	2014
Bryant Lake	801	1491	1114	992	1330
Twin Lake	96	184	198	156	141
Little Long Lake	0	206	95	198	210
Lake Minnetonka	1279	1487	413	1230	1005
Total	6254	7988	5459	6230	6172

- There was a total of 12,366 watercraft inspections conducted at the 6 boat accesses that the Hennepin County AIS Prevention grant supplements cost for providing inspection services in 2024. The watercraft inspections at these 6 lakes represents approximately 77% of the total watercraft inspections (16,102 in 2024) conducted by TRPD staff at all accesses it provides services. This grant does not supplement watercraft inspection services at Lake Independence in Hennepin County for Baker Park Reserve and the Carver County Lakes in Carver Park Reserve (Zumbra, Auburn, and Steiger).
- The total number of watercraft inspections in 2024 (12,366) was similar to 2023 (12,474). The number of inspections in 2023 & 2024 was considerably lower in comparison to pandemic covid period of 2020 and 2021 (Table 7). Despite the fewer watercraft inspected the past couple of years, the number of watercraft inspected per hour has been significant and has been similar to previous years following the Covid pandemic (Table 8). Three Rivers Park District has observed a significant increase in water-based recreation activities since the Covid pandemic in 2020.

Table 7 - Comparison of watercraft inspections provided for 2020-2024.

<i>Access</i>	<i>Watercraft Inspections 2020</i>	<i>Watercraft Inspections 2021</i>	<i>Watercraft Inspections 2022</i>	<i>Watercraft Inspections 2023</i>	<i>Watercraft Inspections 2024</i>
Medicine Lake	10413	8585	4980	4740	4850
Fish Lake	3393	3159	3050	2926	2845
Bryant Lake	954	1538	1139	886	1452
Twin Lake	433	404	300	140	78
Little Long Lake	0	36	70	134	126
Lake Minnetonka	4540	4115	1545	3648	3015
Total	19733	17837	11084	12474	12366

Table 8 - Comparison of watercraft inspections per hour for 2020-2024.

<i>Access</i>	<i>Watercraft Inspections/hour 2020</i>	<i>Watercraft Inspections/hour 2021</i>	<i>Watercraft Inspections/hour 2022</i>	<i>Watercraft Inspections/hour 2023</i>	<i>Watercraft Inspections/hour 2024</i>
Medicine Lake	4.78	3.52	3.41	3.74	3.29
Fish Lake	1.79	1.45	1.40	1.38	1.41
Bryant Lake	1.19	1.03	1.02	0.89	1.09
Twin Lake	4.51	2.20	1.52	0.90	0.55
Little Long Lake	0	0.17	0.74	0.68	0.60
Lake Minnetonka	3.55	2.77	3.74	2.97	3.00
Total	3.16	2.23	2.03	2.25	2.00

- Fish Lake typically has the most watercraft inspection service hours per year in comparison to the other lakes that receive Hennepin County AIS Prevention Grant Funds. The watercraft inspection service hours have been consistently ranging between 2000 to 2100 hours per year since 2021 (Table 6). The Fish Lake access receives funding assistance (typically \$5000 to \$8000/year) from the Fish Lake Area Residents Association (FLARA) to supplement the watercraft inspections hours. In 2024, Hennepin County provided AIS prevention grant funding (\$8000) assistance to FLARA that was used to supplement TRPD's watercraft inspection program. This funding has been critical to maintain watercraft inspection service hours at the Fish Lake access. The Fish Lake access received a considerable amount of activity in 2024 where there was 2845 watercraft inspections completed, which was approximately 1.38 boats inspected per hour (Table 7 & 8). All of the watercraft inspections for Fish Lake are considered incoming inspections at the regional park gate entrance. Every year boats have been denied access into Fish Lake due to having attached zebra mussels (6 boats in 2024) (Table 4); and these boats are required to be decontaminated before they are allowed to launch their boat in Fish Lake. It should be noted that zebra mussels were discovered on a sampling plate September 22nd of 2022 at the Fish Lake boat access. Three Rivers Park District surveys conducted in 2023 & 2024 suggest that the zebra mussel population has increased considerably throughout the entire lake making the lake high risk for spread to other lakes in the metro area. Consequently, Fish Lake will need to consider outgoing/exiting inspections in the future.

- Medicine Lake had the largest number of watercraft inspections (4850) representing approximately 39% of the total inspections covered by the grant in 2024 (Table 7). This access receives a significant amount of boat traffic (3.29 inspections/hour) and is considered high risk for new infestations as well as spreading AIS to other lakes (Table 8). The watercraft inspection services hours in 2024 were similar to the number of hours provided in 2022 & 2023. It has become critical to schedule staff inspections service hours during critical high-use times at Medicine Lake-French Regional Park since the lake is considered high risk due to the discovery of zebra mussels in 2017 and starry stonewort in 2018. Due to the high risk of spread to other lakes, there was a significant number of outgoing inspections (1013 inspections) that represented 21% of the total watercraft inspection in 2024.
 - Zebra mussels were discovered on several docks throughout the lake in November of 2017. Recent shoreline and snorkeling surveys conducted in 2020 through 2024 indicated that zebra mussels have significantly spread to other parts of the lake.
 - A watercraft inspector discovered starry stonewort on a boat exiting Medicine Lake in July of 2018. This was the first discovery of starry stonewort within the metro area. The discovery of starry stonewort by a trained watercraft inspector supports the significant importance for the watercraft inspection program. This recent discovery of starry stonewort initiated a rapid response plan for treatment/control measures by TRPD and MnDNR staff to minimize spread to other areas of the lake as well as reduce the risk of spread to other lakes. There has been a minimum of 4 treatments conducted each year from 2019 through 2024 to contain the Starry Stonewort within an area (14-acres) adjacent to the boat access. It appears that the growth of starry stonewort has become suppressed due to continuous treatment efforts over the past several years. However, aquatic vegetation surveys have unfortunately indicated that starry stonewort has been found (relatively small abundance) in other areas of the lake outside of the treatment area.
- Bassett Creek Watershed Management Commission used Hennepin County AIS prevention grant dollars to purchase a decontamination unit to be operated by TRPD staff at French Regional Park in 2018. Bassett Creek Watershed Management Commission has financially contributed \$5000 towards the staffing operation of the decontamination unit from 2018-2024. This lake is considered high risk for spread of zebra mussels and starry stonewort to other lakes in the area. There was a total of 85 watercraft that were decontaminated at French Regional Park-Medicine Lake in 2024. An increase in outgoing inspections hours for Medicine Lake contributed to the high number of decontaminations (85) reported for Medicine Lake in 2024 (Table 3).
- Three Rivers Park District used Hennepin County AIS prevention grant dollars to purchase a decontamination unit for the Lake Minnetonka Regional Park in 2018. The Lake Minnetonka Regional Park access has a significant amount of use where there was 3015 watercraft inspection completed in 2024. Eurasian Watermilfoil has been in portions of Lake Minnetonka since 1987; and zebra mussels were discovered in Lake Minnetonka as recently as 2010. Lake

Minnetonka Regional Park is considered high risk (3 inspections/hour) for new infestations and the transport of aquatic invasive species to other lakes. A total of 73 boats were reported as contaminated trying to enter the lake, which represents approximately 3.6% of the total boats inspected entering the lake. Unfortunately, there was only 6 decontaminations reported in 2024 due to level 2 certified staffing limitations. The number of decontaminations (6) reported in 2024 is significantly lower in comparison to the number of decontaminations (39) reported in 2023.

- A common violation that is reported by Three Rivers Park District watercraft inspectors are boats arriving with their drain plug ready for launch. The percentage of boats inspected with drain plug violations in 2024 were approximately 1.5% for Medicine Lake, 1.6% for Fish Lake, 0.1% for Bryant Lake, and 1.4% for Lake Minnetonka Regional Park (Tables 4 & 5). Typically, the highest use accesses have had the highest percentage of boats with drain plug violations in the past. There was no drain plug violations reported for the lower used accesses of Twin Lake and Little Long Lake in 2024.
- CD3 stations were available for boaters to use at Bryant Lake, Medicine Lake, Fish Lake, Little Long, and Twin Lake accesses. Unfortunately, tool use was not monitored for the stations in 2024. Table 9 shows the tool uses reported from 2022 & 2023.
 - Bryant Lake – The Bryant Lake CD3 station was the first unit installed in Minnesota. The Bryant Lake station has had over 12,535 tool uses since being installed in 2017. This is a conservative estimate since the station was partially closed in 2021 (due to reconstruction of the boat launch and pavement overlay project) and the lack of data reported for 2023 (the unit had problems with downloading of data the entire season) and 2024. Based on tool use data in 2022, the air and grabber are the primary tools consistently being used.
 - Medicine Lake – Hennepin County has provided a Wayside Mobile Trailer CD3 unit at the access since 2020. The station had 1,742 tools used in 2023 with the air tool being the primary tool used.
 - Fish Lake – A CD3 outpost was installed in July of 2020. The unit seems to receive a significant amount of use with a total of 4,920 total tools uses with 1,851 tools used in 2023. All the tools on the Fish Lake outpost unit are being used equally so there really hasn't been a preferred tool used among the boaters.
 - Little Long Lake – The CD3 outpost was installed in July of 2020. This access doesn't have a significant amount of boat traffic because of the remote location and restricted horsepower motor use. There were 101 total tool uses in 2023 with the plug wrench being the primary tool used at the access.
 - Twin Lake – The CD3 outpost was installed in May of 2021. The station has 1,653 total tool uses despite the access not having a significant amount of activity. In 2023, there was 374 tool uses with the drain plug wrench being the primary tool used followed by the brush/weed hook.

Table 9 - CD3 Station Tool Use at each boat access.

Access	CD3 Type	Installation Date	Tool Uses	
			2022	2023
Bryant Lake	Station	6/21/2017	2,368	**
Medicine Lake	Wayside Mobile Trailer	7/2/2020	2,185	1,742
Fish Lake	Outpost	7/18/2020	1,008*	1,851
Little Long Lake	Outpost	7/8/2020	**	101
Twin Lake	Outpost	5/6/2021	545	374

*Fish Lake battery was dead so no readings in April, May, June of 2022. Battery was replaced in July of 2022.

**Little Long & Bryant Lakes were having difficulty downloading data.

- The Hennepin County AIS grant funds were extremely important with providing financial support to supplement TRPD watercraft inspection program in 2024. The Hennepin County AIS grant funds accounted for approximately 43% to 65% of the watercraft inspection budget for lakes covered by the grant in 2024 (Table 2). Hennepin County grant funds have also been used for purchasing of decontamination units at Medicine Lake and Lake Minnetonka; and used for purchasing/installation of CD3 stations at Bryant Lake, Medicine Lake, Fish Lake, Little Long Lake, and Twin Lake. The Hennepin County Aquatic Invasive Species Prevention grant funds has been critical for the implementation of the Three Rivers Park District AIS prevention program.